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U.S. DEPARTMENT OF AGRICULTURE

2 U.S. Consumer and Marketing Service
Grain Division

**OFFICIAL GRAIN STANDARDS
OF
THE UNITED STATES**

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FURTHER INFORMATION

For further information regarding the official grain standards of the United States, apply to the Grain Division, Consumer and Marketing Service, U.S. Department of Agriculture, Federal Center Building, Hyattsville, Md. 20782.

Revised February 1970

NOTE: Some factor percentages and test weights per bushel in these standards have been changed to read whole and tenths (e.g., 5.0). This editing provides uniformity in printing between different grains and reflects the desired degree of accuracy of the standards.

OFFICIAL GRAIN STANDARDS OF THE UNITED STATES FOR WHEAT¹

§ 26.301 Terms defined

For the purposes of the Official Grain Standards of the United States for Wheat, the terms specified in § 26.302 through § 26.312 shall have the meanings stated in said sections respectively.

§ 26.302 Wheat

Wheat shall be the grain of common wheat, club wheat, and durum wheat which, before the removal of the dockage, consists of 50 percent or more of one or more of these wheats and not more than 10.0 percent of other grains for which standards have been established under the United States Grain Standards Act and which, after the removal of the dockage, contains 50 percent or more of whole kernels of one or more of these wheats.

§ 26.303 Dockage

Dockage shall be weed seeds, weed stems, chaff, straw, grain other than wheat, sand, dirt, and any other material other than wheat, which can be removed readily from the wheat by the use of appropriate sieves and cleaning devices; also underdeveloped, shriveled, and small pieces of wheat kernels removed in properly separating the material other than wheat and which cannot be recovered by properly re-screening or recleaning. (See also § 26.315 and § 26.329.)

¹The specifications of these standards shall not excuse failure to comply with the provisions of the Federal Food, Drug, and Cosmetic Act.

§ 26.304 Foreign material

Foreign material shall be all matter other than wheat which is not separated from the wheat in the proper determination of dockage.

§ 26.305 Other grains

Other grains shall be rye, oats, corn, grain sorghum, barley, hull-less barley, flaxseed, emmer, spelt, einkorn, Polish wheat, poulard wheat, cultivated buckwheat, and soybeans.

§ 26.306 Damaged kernels

Damaged kernels shall be kernels and pieces of kernels of wheat and other grains which are heat damaged, sprouted, frosted, badly ground damaged, badly weather damaged, moldy, diseased, or otherwise materially damaged.

§ 26.307 Heat-damaged kernels

Heat-damaged kernels shall be kernels and pieces of kernels of wheat and other grains which have been materially discolored and damaged by heat.

§ 26.308 Contrasting classes

Contrasting classes shall be (a) Durum Wheat, Red Durum Wheat, and White Wheat in the classes Hard Red Spring Wheat and Hard Red Winter Wheat; (b) Hard Red Spring Wheat, Red Durum Wheat, Hard Red Winter Wheat, Soft Red Winter Wheat, and White Wheat in the class Durum Wheat; (c) Durum Wheat and Red Durum Wheat in the class Soft Red Winter Wheat; and (d) Durum Wheat, Red Durum Wheat, Hard Red Spring Wheat, and Hard Red Winter Wheat in the class White Wheat.

§ 26.309 Shrunken and broken kernels

Shrunken and broken kernels shall be all kernels and pieces of kernels of wheat and other matter that will pass readily through a $0.064 \times \frac{3}{8}$ oblong hole sieve.

§ 26.310 0.064 x $\frac{3}{8}$ oblong hole sieve

A 0.064 x $\frac{3}{8}$ oblong hole sieve shall be a metal sieve 0.0319 inch thick perforated with oblong holes 0.064 inch wide by $\frac{3}{8}$ (0.375) inch long which are $\frac{1}{8}$ (0.1250) inch from center to center and with 0.0525 inch end bridges. The perforations shall be staggered in relation to the adjacent rows.

§ 26.311 Stones

Stones shall be concreted earthy or mineral matter and other substances of similar hardness that do not disintegrate readily in water.

§ 26.312 Defects

Defects shall include damaged kernels, foreign material, and shrunken and broken kernels.

§ 26.313 Principles governing application of standards

The principles stated in § 26.314 through § 26.317 shall apply in the determination of the classes and grades of wheat.

§ 26.314 Basis of determination

Each determination of dockage, moisture, temperature, odor, garlic, live weevils or other insects injurious to stored grain, and distinctly low quality shall be upon the basis of the grain as a whole. All other determinations shall be upon the basis of the grain when free from dockage.

§ 26.315 Percentages

All percentages shall be upon the basis of weight. Percentages except for dockage shall be expressed in whole and tenth percent to the nearest tenth of a percent. The percentage of dockage when equal to one-half percent or more shall be stated in terms of half percent, whole percent, or whole and half percent, as the case may be, with other fractions disregarded as shown in the following examples: Dockage ranging from 0.5 to 0.9 percent shall be expressed as 0.5 percent, from 1.0 to 1.4 percent as 1.0 percent, from 1.5 to 1.9 percent as 1.5 percent, etc.

§ 26.316 Moisture

Moisture shall be ascertained by use of the equipment and procedure prescribed by the Consumer and Marketing Service, United States Department of Agriculture. (Information thereon may be obtained from said Service.)

§ 26.317 Test weight per bushel

Test weight per bushel shall be the weight per Winchester bushel as determined by the method prescribed by the United States Department of Agriculture, as described in Circular No. 921 issued June 1953. Test weight per bushel shall be expressed to the nearest tenth of a pound.

§ 26.318 Classes

Wheat shall be divided into the following seven classes: Hard Red Spring Wheat, Durum Wheat, Red Durum Wheat, Hard Red Winter Wheat, Soft Red Winter Wheat, White Wheat, and Mixed Wheat.

§ 26.319 Hard Red Spring Wheat

The class Hard Red Spring Wheat shall include all varieties of hard red spring wheat. This class shall be divided into the following three subclasses:

(a) **Dark Northern Spring Wheat.** The subclass Dark Northern Spring Wheat shall be Hard Red Spring Wheat with 75 percent or more of dark, hard, and vitreous kernels.

(b) **Northern Spring Wheat.** The subclass Northern Spring Wheat shall be Hard Red Spring Wheat with 25.0 percent or more but less than 75 percent of dark, hard, and vitreous kernels.

(c) **Red Spring Wheat.** The subclass Red Spring Wheat shall be Hard Red Spring Wheat with less than 25.0 percent of dark, hard, and vitreous kernels.

§ 26.320 Durum Wheat

The class Durum Wheat shall include all varieties of white (amber) Durum Wheat. This class shall be divided into the following three subclasses:

(a) **Hard Amber Durum Wheat.** The subclass Hard Amber Durum Wheat shall be Durum Wheat with 75 percent or more of hard and vitreous kernels of amber color.

(b) **Amber Durum Wheat.** The subclass Amber Durum Wheat shall be Durum Wheat with 60 percent or more but less than 75 percent of hard and vitreous kernels of amber color.

(c) **Durum Wheat.** The subclass Durum Wheat shall be Durum Wheat with less than 60 percent of hard and vitreous kernels of amber color.

§ 26.321 Red Durum Wheat

The class Red Durum Wheat shall include all varieties of red durum wheat. There are no subclasses in this class.

§ 26.322 Hard Red Winter Wheat

The class Hard Red Winter Wheat shall include all varieties of hard red winter wheat. This class shall be divided into the following three subclasses:

(a) **Dark Hard Winter Wheat.** The subclass Dark Hard Winter Wheat shall be Hard Red Winter Wheat with 75 percent or more of dark, hard, and vitreous kernels.

(b) **Hard Winter Wheat.** The subclass Hard Winter Wheat shall be Hard Red Winter Wheat with 40 percent or more but less than 75 percent of dark, hard, and vitreous kernels.

(c) **Yellow Hard Winter Wheat.** The subclass Yellow Hard Winter Wheat shall be Hard Red Winter Wheat with less than 40 percent of dark, hard, and vitreous kernels.

§ 26.323 Soft Red Winter Wheat

The class Soft Red Winter Wheat shall include all varieties of soft red winter wheat. There are no subclasses in this class.

§ 26.324 White Wheat

The class White Wheat shall include all varieties of white wheat. This class shall be divided into the following four subclasses:

(a) **Hard White Wheat.** The subclass Hard White Wheat shall be White Wheat with 75 percent or more of hard kernels and may contain not more than 10.0 percent of wheat of the white club varieties.

(b) **Soft White Wheat.** The subclass Soft White Wheat shall be White Wheat with less than 75 percent of hard kernels and may contain not more than 10.0 percent of wheat of the white club varieties.

(c) **White Club Wheat.** The subclass White Club Wheat shall be White Wheat consisting of wheat of the white club varieties and may contain not more than 10.0 percent of other white wheat.

(d) **Western White Wheat.** The subclass Western White Wheat shall be White Wheat containing more than 10.0 percent of wheat of the white club varieties and more than 10.0 percent of other white wheat.

§ 26.325 Mixed Wheat

The class Mixed Wheat shall be any mixture of wheat which consists of one of the following:

(a) Two or more classes each of which constitutes more than 10.0 percent of the mixture; or

(b) One class that constitutes more than 10.0 per cent and two or more other classes in combination that exceed 10.0 percent of the mixture; or

(c) Several classes none of which constitutes 10.0 percent or more of the mixture but which combined meet the definition for wheat.

§ 26.326 Grades

Grades shall be the U.S. numerical grades, U.S. Sample grade, and special grades provided for in §§ 26.327 and 26.328.

Wheat

(a) Grade and grade requirements for all classes of Wheat except Mixed Wheat. (See also § 26.328.)

Grade	Minimum test weight per bushel		Maximum limits of—						
			Defects					Wheat of other classes ¹	
	Hard Red Spring Wheat or White Club Wheat	All other classes and sub-classes	Heat-damaged kernels	Dam-aged kernels (total)	Foreign material	Shrunk and broken kernels	Defects (total)	Con-trasting classes	Wheat of other classes (total)
U.S. No. 1	Pounds 58.0	Pounds 60.0	Percent 0.1	Percent 2.0	Percent 0.5	Percent 3.0	Percent 3.0	Percent 1.0	Percent 3.0
U.S. No. 2	57.0	58.0	.2	4.0	1.0	5.0	5.0	2.0	5.0
U.S. No. 3	55.0	56.0	.5	7.0	2.0	8.0	8.0	3.0	10.0
U.S. No. 4	53.0	54.0	1.0	10.0	3.0	12.0	12.0	10.0	10.0
U.S. No. 5	50.0	51.0	3.0	15.0	5.0	20.0	20.0	10.0	10.0
U.S. Sample grade	U.S. Sample grade shall be wheat which does not meet the requirements for any of the grades from U.S. No. 1 to U.S. No. 5, inclusive; or which contains more than two crotalaria seeds (<i>Crotalaria spp.</i>) in 1,000 grams of grain, or contains castor beans (<i>Ricinus communis</i>), stones, broken glass, animal filth, an unknown foreign substance(s), or a commonly recognized harmful or toxic substance(s); or which is musty, sour, or heating; or which has any commercially objectionable foreign odor except of smut or garlic; or which contains a quantity of smut so great that any one or more of the grade requirements cannot be applied accurately; or which is otherwise of distinctly low quality.								

¹ Red Durum Wheat of any grade may contain not more than 10.0 percent of wheat of other classes.

(b) Grades and grade requirements for Mixed Wheat. (See also § 26.328.) Mixed Wheat shall be graded according to the U.S. numerical and U.S. Sample grade requirements of the class of wheat which predominates in the mixture, except that the factor "wheat of other classes" shall be disregarded.

§ 26.328 Special grades, special grade requirements, and special grade designations

(a) Tough wheat—(1) Requirements. Tough wheat shall be wheat which contains more than 13.5 percent of moisture.

(2) Grade designation. Tough wheat shall be graded and designated according to the grade requirements of the standards applicable to such wheat if it were not tough, and there shall be added to and made a part of the grade designation the word "Tough."

(b) Smutty wheat—(1) Requirements. Smutty wheat shall be wheat which has an unmistakable odor of smut or which contains balls, portions of balls, or spores, of smut in a quantity equivalent to more than 14 balls of average size in 250 grams of wheat.

(2) Grade designation. Smutty wheat shall be graded and designated according to the grade requirements of the standards applicable to such wheat if it were not smutty; and

(i) In the case of smutty wheat which has an unmistakable odor of smut, or which contains balls, portions of balls, or spores, of smut, in excess of a quantity equal to 14 balls but not in excess of a quantity equal to 30 balls of average size in 250 grams of wheat, there shall be added to and made a part of the grade designation the words "Light Smutty"; and

(ii) In the case of smutty wheat which contains balls, portions of balls, or spores, of smut, in excess of a quantity equal to 30 balls of average size in 250 grams of wheat, there shall be added to and made a part of the grade designation the word "Smutty."

(c) Garlicky wheat—(1) Requirements. Garlicky wheat shall be wheat which contains two or more green garlic bulblets, or an equivalent quantity of dry or partly dry bulblets, in 1,000 grams of wheat.

(2) Grade designation. Garlicky wheat shall be graded and designated according to the grade requirements of the standards applicable to such wheat if it were not garlicky; and

(i) In the case of garlicky wheat which contains two or more but not more than six green garlic bulblets, or an equivalent quantity of dry or partly dry bulblets, in 1,000 grams of wheat, there shall be added to and made a part of the grade designation the words "Light Garlicky"; and

(ii) In the case of garlicky wheat which contains more than six green garlic bulblets, or an equivalent quantity of dry or partly dry bulblets, in 1,000 grams of wheat, there shall be added to and made a part of the grade designation the word "Garlicky."

(d) Weevily wheat—(1) Requirements. Weevily wheat shall be wheat which is infested with live weevils or other insects injurious to stored grain.

(2) Grade designation. Weevily wheat shall be graded and designated according to the grade requirements of the standards applicable to such wheat if it were not weevily, and there shall be added to and made a part of the grade designation the word "Weevily."

(e) Ergoty wheat—(1) Requirements. Ergoty wheat shall be wheat which contains more than 0.3 percent of ergot.

(2) Grade designation. Ergoty wheat shall be graded and designated according to the grade requirements of the standards applicable to such wheat if it were not ergoty, and there shall be added to and made a part of the grade designation the word "Ergoty."

(f) Treated wheat—(1) Requirements. Treated wheat shall be wheat which has been scoured, limed, washed, sulfured, or treated in such a manner that the true quality is not reflected by either the U.S. numerical grade or the U.S. Sample grade designation alone.

(2) **Grade designation.** Treated wheat shall be graded and designated according to the grade requirements of the standards applicable to such wheat if it were not treated, and there shall be added to and made a part of the grade designation a statement indicating the kind of treatment.

(g) **Heavy wheat—(1) Requirements.** Heavy wheat shall be (i) Hard Red Spring Wheat of grade U.S. No. 1, U.S. No. 2, or U.S. No. 3 which has a test weight per bushel of 60 pounds or more, or (ii) any other class of wheat of grade U.S. No. 1, U.S. No. 2, or U.S. No. 3 which has a test weight per bushel of 62 pounds or more.

(2) **Grade designation.** Heavy wheat shall be graded and designated according to the grade requirements of the standards applicable to such wheat if it were not heavy, and there shall be added to and made a part of the grade designation preceding the name of the class or subclass, as the case may be, the word "Heavy."

§ 26.329 Grade designations for wheat

(See also § 26.328.) The grade designations for wheat shall include the letters "U.S."; the number of the grade or the words "Sample grade", as the case may be; the name of the applicable subclass, or in the case of Red Durum Wheat, Soft Red Winter Wheat, and Mixed Wheat, the name of the class; the name of each applicable special grade; and when applicable the word "dockage" together with the percentage thereof. In the case of Western White Wheat, the grade designation shall also include, following the name of the subclass, the name and percentage of white club wheat and other white wheat in the mixture. In the case of Mixed Wheat, the grade designation shall also include, following the name of the class, the name and percentage of Hard Red Spring, Durum, Red Durum, Hard Red Winter, Soft Red Winter, and White Wheat, if any, contained in the mixture.

OFFICIAL GRAIN STANDARDS OF THE UNITED STATES FOR CORN¹

§ 26.351 Terms defined

For the purposes of the Official Grain Standards of the United States for Corn (Maize):

(a) Corn. Corn shall be any grain which consists of 50 percent or more of whole kernels of shelled dent corn and/or shelled flint corn (*Zea mays*) and may contain not more than 10.0 percent of other grains for which standards have been established under the United States Grain Standards Act.

(b) Classes. Corn shall be divided into the following three classes: Yellow Corn, White Corn, and Mixed Corn.

(c) Yellow Corn. The class Yellow Corn shall be yellow-kerneled corn and may contain not more than 5.0 percent of corn of other colors. Yellow kernels of corn with a slight tinge of red shall be considered as yellow corn.

(d) White Corn. The class White Corn shall be white-kerneled corn and may contain not more than 2.0 percent of corn of other colors. White kernels of corn with a slight tinge of light straw or pink color shall be considered as white corn.

(e) Mixed Corn. The class Mixed Corn shall be corn which does not meet the color requirements for either of the classes Yellow Corn or White Corn and shall include white-capped yellow corn.

(f) Grades. Grades shall be the U.S. numerical grades, U.S. Sample grade, and special grades provided for in § 26.353.

¹ The specifications of these standards shall not excuse failure to comply with the provisions of the Federal Food, Drug, and Cosmetic Act.

(g) Broken corn and foreign material. Broken corn and foreign material shall be kernels and pieces of kernels of corn and all matter other than corn which will pass readily through a 12/64 sieve, and all matter other than corn which remains in the sieved sample.

(h) Damaged kernels. Damaged kernels shall be kernels and pieces of kernels of corn which are heat damaged, sprouted, frosted, badly ground damaged, badly weather damaged, moldy, diseased, or otherwise materially damaged.

(i) Heat-damaged kernels. Heat-damaged kernels shall be kernels and pieces of kernels of corn which have been materially discolored and damaged by heat.

(j) 12/64 sieve. A 12/64 sieve shall be an aluminum sieve 0.0319 inch thick perforated with round holes 0.1875 (12/64) inch in diameter which are $\frac{1}{4}$ inch from center to center. The perforations of each row shall be staggered in relation to the adjacent row.

(k) Stones. Stones shall be concreted earthy or mineral matter and other substances of similar hardness that do not disintegrate readily in water.

§ 26.352 Principles governing the application of the standards

The following principles shall apply in the determination of the classes and grades of corn:

(a) Basis of determination. Each determination of class, damaged kernels, heat-damaged kernels, flint corn, and flint and dent corn shall be upon the basis of the grain after the removal of the broken corn and foreign material. All other determinations shall be upon the basis of the grain as a whole.

(b) Percentages. All percentages shall be determined upon the basis of weight.

(c) Moisture. Moisture shall be ascertained by the air-oven method for corn prescribed by the United States Department of Agriculture as described in Service and Regulatory Announcements No. 147 (1959 Revision) of the Agricultural Marketing Service, or ascertained by any method which gives equivalent results.

(d) **Test weight per bushel.** Test weight per bushel shall be the weight per Winchester bushel as determined by the method prescribed by the United States Department of Agriculture as described in Circular No. 921, issued June 1953, or as determined by any method which gives equivalent results.

§ 26.353 Grades, grade requirements, and grade designations

The following grades, grade requirements, and grade designations are applicable under these standards:

Corn

(a) **Grades and grade requirements for Corn.** (See also paragraph (c) of this section.)

Grade	Minimum test weight per bushel	Maximum limits of—			
		Moisture	Broken corn and foreign material	Damaged kernels	
				Total	Heat- damaged kernels
	<i>Pounds</i>	<i>Percent</i>	<i>Percent</i>	<i>Percent</i>	<i>Percent</i>
U.S. No. 1-----	56. 0	14. 0	2. 0	3. 0	0. 1
U.S. No. 2-----	54. 0	15. 5	3. 0	5. 0	. 2
U.S. No. 3-----	52. 0	17. 5	4. 0	7. 0	. 5
U.S. No. 4-----	49. 0	20. 0	5. 0	10. 0	1. 0
U.S. No. 5-----	46. 0	23. 0	7. 0	15. 0	3. 0
U.S. Sample grade.	U.S. Sample grade shall be corn which does not meet the requirements for any of the grades from U.S. No. 1 to U.S. No. 5, inclusive; or which contains stones; or which is musty, or sour, or heating; or which has any commercially objectionable foreign odor; or which is otherwise of distinctly low quality.				

Grade designations

(b) Grade designations for corn. The grade designations for corn shall include, in the order named, the letters "U.S."; the number of the grade or the words "Sample grade," as the case may be; the name of the applicable class; and the name of each applicable special grade.

Special grades for corn

(c) Special grades, special grade requirements, and special grade designations for corn.

(1) Flint Corn—(i) Requirements. Flint corn shall be corn of any class which consists of 95 percent or more of flint corn.

(ii) Grade designation. Flint corn shall be graded and designated according to the grade requirements of the standards applicable to such corn if it were not flint, and there shall be added to and made a part of the grade designation, immediately following the class name, the word "Flint."

(2) Flint and dent corn—(i) Requirements. Flint and dent corn shall be corn of any class which consists of a mixture of flint and dent corn containing more than 5.0 percent but less than 95 percent of flint corn.

(ii) Grade designation. Flint and dent corn shall be graded and designated according to the grade requirements of the standards applicable to such corn if it were not flint and dent, and there shall be added to and made a part of the grade designation, immediately following the class name, the words "Flint and Dent" and the approximate percentage of flint corn.

(3) Weevily corn—(i) Requirements. Weevily corn shall be corn which is infested with live weevils or other insects injurious to stored grain.

(ii) Grade designation. Weevily corn shall be graded and designated according to the grade requirements of the standards applicable to such corn if it were not weevily, and there shall be added to and made a part of the grade designation the word "Weevily."

Interpretations [Added]

**§ 26.901 Interpretation with respect to the term
“distinctly low quality”**

The term “distinctly low quality,” when used in the official grain standards of the United States, shall be construed to include grain which contains more than two *crotalaria* seeds (*Crotalaria* spp.) in 1,000 grams of grain.

**§ 26.904 Interpretation with respect to the term
“yellow kernels of corn with a slight tinge of red.”**

The term “yellow kernels of corn with a slight tinge of red,” when used in the Official Grain Standards of the United States for Corn (see § 26.351(c)) shall be construed to include kernels which are yellow and/or light red in color, and kernels which are yellow and dark red in color provided the dark red color covers less than 50 percent of the kernel. Yellow and dark red kernels in which the dark red color covers 50 percent or more of the kernel shall be considered as “corn of other colors.”

**§ 26.905 Interpretation with respect to the term
“white kernels of corn with a slight tinge of light straw or pink color.”**

The term “white kernels of corn with a slight tinge of light straw or pink color,” when used in the Official Grain Standards of the United States for Corn (see § 26.351(d)) shall be construed to include kernels which are white and/or light straw or light pink in color, and kernels which are white and pink in color provided the pink color covers less than 50 percent of the kernel. White and pink kernels in which the pink color covers 50 percent or more of the kernel shall be considered as “corn of other colors.”

OFFICIAL GRAIN STANDARDS OF THE UNITED STATES FOR BARLEY¹

§ 26.201 Terms defined

For the purposes of the Official Grain Standards of the United States for Barley:

(a) Barley. Barley shall be any grain which, before the removal of dockage, consists of 50 percent or more of barley, and may contain not more than 25.0 percent of other grains for which standards have been established under the United States Grain Standards Act. The term "barley" as used in these standards shall not include hull-less barley.

(b) Classes. Barley shall be divided into the following three classes: Barley, Western Barley, and Mixed Barley.

(c) Barley. The class Barley shall be any barley with white hulls which is grown east of the Rocky Mountains or in Alaska and may include not more than 10.0 percent of black barley or of barley of the class Western Barley, either singly or in any combination. This class shall be divided into the following three subclasses:

(1) Malting Barley. The subclass Malting Barley shall be six-rowed barley of the class Barley which has 90 percent or more of the kernels with white aleurone layers; which is not semisteely in mass; which after the removal of dockage, contains not more than 5.0 percent of the two-rowed and/or other types or varieties of barley unsuitable for malting (such as Trebi), 4.0 percent damaged kernels, 3.0 percent

¹ The specifications of these standards shall not excuse failure to comply with the provisions of the Federal Food, Drug, and Cosmetic Act.

foreign material, 8.0 percent skinned and broken kernels, 15.0 percent thin barley, 2.0 percent black barley, and 5.0 percent other grains; which has a minimum test weight per bushel of 43 pounds; which contains a minimum of 90 percent sound barley; which does not contain barley injured by frost or heat; and which is not smutty, garlicky, weevily, ergoty, or bleached; and which otherwise meets the requirements of grades U.S. Nos. 1 to 3, inclusive, of the subclass Barley.

(2) Blue Malting Barley. The subclass Blue Malting Barley shall be six-rowed barley of the class Barley which has 90 percent or more of the kernels with blue aleurone layers, and which otherwise meets the requirements of the subclass Malting Barley.

(3) Barley. The subclass Barley shall be any barley of the class Barley which does not meet the requirements of the subclass Malting Barley, or Blue Malting Barley.

(d) Western Barley. The class Western Barley shall be any barley with white hulls which is grown west of the Great Plains area of the United States and may include not more than 10.0 percent of black barley or of barley of the class Barley, either singly or in any combination, except that barley grown in the State of Alaska shall not be classified as Western Barley. (See paragraph (c) of this section.)

(e) Mixed Barley. The class Mixed Barley shall be any mixture of barley which does not meet the requirements of the classes Barley or Western Barley. Black barley shall be classified as Mixed Barley.

(f) Grades. Grades shall be the U.S. numerical grades, U.S. Sample grade, and special grades provided for in § 26.203.

(g) Dockage. Dockage shall be weed seeds, weed stems, chaff, straw, grain other than barley, sand, dirt, and any material other than barley which can be removed readily from the barley by the use of appropriate sieves and cleaning devices; also under-developed, shriveled, and small pieces of barley kernels removed in properly separating the material other than barley and which cannot be recovered by properly rescreening or recleaning.

(h) Sound barley. Sound barley shall be kernels and pieces of kernels of barley remaining after the removal of dockage, which are not damaged or materially discolored by blight and/or mold, which are not heat damaged, sprouted, malted, frosted, badly ground damaged, badly weather damaged, or otherwise materially damaged.

(i) Damaged kernels. Damaged kernels shall be kernels and pieces of kernels of barley, other grains, and wild oats which are damaged or materially discolored by blight and/or mold, or which are heat damaged, sprouted, malted, frosted, badly ground damaged, badly weather damaged, or otherwise materially damaged.

(j) Heat-damaged kernels. Heat-damaged kernels shall be kernels and pieces of kernels of barley, other grains, and wild oats, which have been materially discolored and damaged by heat.

(k) Foreign material. Foreign material shall be all matter other than barley, other grains, and wild oats, which is not separated from the barley in the proper determination of dockage.

(l) Other grains. Other grains shall be wheat, rye, oats, corn, grain sorghum, hull-less barley, flaxseed, emmer, spelt, einkorn, Polish wheat, poulard wheat, cultivated buckwheat, and soybeans.

(m) Wild oats. Wild oats shall be seeds of *Avena fatua* and *A. sterilis*.

(n) Wild brome grasses. Wild brome grasses shall be the seeds of brome grasses such as *Bromus rigidus* which have harsh awns and which are injurious when fed to livestock.

(o) Broken kernels. Broken kernels shall be pieces of barley kernels.

(p) Skinned kernels. Skinned kernels shall be any barley kernels from which one-third or more of the hull has been removed, or which has the hull loosened or removed over the germ.

(q) Black barley. Black barley shall be barley with black hulls.

(r) Thin barley. (1) Thin barley in the class Barley shall be barley and other matter that will pass readily through a $5/64 \times 3/4$ sieve.

(2) Thin barley in the class Western Barley shall be barley and other matter that will pass readily through a $5\frac{1}{2}/64 \times 3/4$ sieve.

(s) **Stones.** Stones shall be concreted earthy or mineral matter and other substances of similar hardness that do not disintegrate readily in water.

(t) **$5/64$ by $3/4$ sieve.** A $5/64$ by $3/4$ sieve shall be a metal sieve 0.032 inch thick perforated with slotted perforations $0.0781 (5/64)$ by $0.750 (3/4)$ inch with approximately 865 perforations per square foot.

(u) **$5\frac{1}{2}/64$ by $3/4$ sieve.** A $5\frac{1}{2}/64 \times 3/4$ sieve shall be a metal sieve 0.032 inch thick perforated with slotted perforations $0.0858 (5\frac{1}{2}/64)$ inch by $0.750 (3/4)$ inch with approximately 856 perforations per square foot.

§ 26.202 Principles covering the application of the standards

The following principles shall apply in the determination of the classes and grades of barley:

(a) **Basis of determination.** Each determination of dockage, temperature, odor, garlic, live weevils or other insects injurious to stored grain, and distinctly low quality shall be upon the basis of the grain as a whole. Each determination of heat-damaged kernels and of white aleurone layers in Malting Barley and blue aleurone layers in Blue Malting Barley shall be upon the basis of the pearled dockage-free grain. All other determinations shall be upon the basis of the grain when free from dockage.

(b) **Percentages.** All percentages shall be upon the basis of weight.

(c) **Moisture.** Moisture shall be ascertained by the air-oven method prescribed by the United States Department of Agriculture, as described in Service and Regulatory Announcement No. 147, issued by the Agricultural Marketing Service, or ascertained by any method which gives equivalent results.

(d) **Test weight per bushel.** Test weight per bushel shall be the weight per Winchester bushel as determined by the method prescribed by the United States Department of Agriculture, as described in Circular 921 issued June 1953, or as determined by any method which gives equivalent results.

§ 26.203 Grades, grade requirements, and grade designations

The following grades, grade requirements, and grade designations are applicable under these standards:

Barley

(a) Grades and grade requirements for the subclass Barley of the class Barley. (See also paragraph (g) of this section.)

Grade	Minimum limits of—		Maximum limits of—					
	Test weight per bushel	Sound barley	Total damaged kernels	Heat-damaged kernels	Foreign material	Broken kernels	Thin barley	Black barley
	Pounds	Percent	Percent	Percent	Percent	Percent	Percent	Percent
U.S. No. 1-----	47.0	97.0	2.0	0.2	1.0	5.0	10.0	0.5
U.S. No. 2-----	45.0	94.0	4.0	.3	2.0	10.0	15.0	1.0
U.S. No. 3-----	43.0	90.0	6.0	.5	3.0	15.0	25.0	2.0
U.S. No. 4 ¹ -----	40.0	80.0	8.0	1.0	4.0	20.0	35.0	5.0
U.S. No. 5-----	36.0	70.0	10.0	3.0	6.0	30.0	75.0	10.0
U.S. Sample grade-----	U.S. Sample grade shall include barley of the class Barley, which does not come within the grade requirements of any of the grades from U.S. No. 1 to U.S. No. 5, inclusive; or which contains more than 16.0 percent of moisture; or which contain stones; or which is musty, or sour, or heating; or which has any commercially objectionable foreign odor except of smut or garlic; or which contains a quantity of smut so great that any one or more of the grade requirements cannot be applied accurately; or which is otherwise of distinctly low quality.							

¹ Barley that is badly stained or materially weathered, shall not be graded higher than U.S. No. 4.

Barley (Malting Barley and Blue Malting Barley)

(b) Grades and grade requirements for the subclasses Malting Barley and Blue Malting Barley of the class Barley. (See also paragraph (g) of this section.)

Grade	Minimum limits of—		Maximum limits of—					
	Test weight per bushel	Sound barley	Damaged kernels	Foreign material	Skinned and broken kernels	Thin barley	Black barley	Other grains
	<i>Pounds</i>	<i>Percent</i>	<i>Percent</i>	<i>Percent</i>	<i>Percent</i>	<i>Percent</i>	<i>Percent</i>	<i>Percent</i>
U.S. No. 1-----	47.0	97.0	2.0	1.0	4.0	7.0	0.5	2.0
U.S. No. 2-----	45.0	94.0	3.0	2.0	6.0	10.0	1.0	3.0
U.S. No. 3-----	43.0	90.0	4.0	3.0	8.0	15.0	2.0	5.0

NOTE: Barley of the class Barley which does not meet the requirements of any of the grades U.S. No. 1 to U.S. No. 3, inclusive, for the subclasses Malting Barley and Blue Malting Barley shall be classified and graded according to the grade requirements for the subclass Barley.

Western Barley

(c) Grades and grade requirements for Western Barley.
(See also paragraph (g) of this section.)

Grade	Minimum limits of sound barley	Maximum limits of—				
		Heat-damaged kernels (barley, other grains, and wild oats)	Wild oats	Foreign material	Broken kernels	Black barley
	<i>Per-cent</i>	<i>Per-cent</i>	<i>Per-cent</i>	<i>Per-cent</i>	<i>Per-cent</i>	<i>Per-cent</i>
U.S. No. 1-----	98.0	0.1	1.0	0.5	3.0	0.5
U.S. No. 2-----	96.0	.2	2.0	1.0	6.0	1.0
U.S. No. 3-----	93.0	.3	3.0	2.0	10.0	2.0
U.S. No. 4-----	88.0	.5	5.0	3.0	15.0	5.0
U.S. No. 5-----	80.0	1.0	10.0	4.0	25.0	10.0
U.S. Sample grade.	U.S. Sample grade shall include barley of the class Western Barley which does not come within the grade requirements of any of the grades from U.S. No. 1 to U.S. No. 5, inclusive; or which contains more than 15 percent of moisture; or which contains stones; or which is musty, or sour, or heating; or which has any commercially objectionable foreign odor except of smut or garlic; or which contains a quantity of smut so great that any one or more of the grade requirements cannot be applied accurately; or which contains the seeds of wild brome grasses of a character and in a quantity sufficient to cause the grain to be of low quality for feeding purposes; or which is otherwise of distinctly low quality.					

Mixed Barley

(d) Grades and grade requirements for the class Mixed Barley. The class Mixed Barley shall be graded according to the grade requirements of the class of Barley which predominates in the mixture. If black barley predominates, the grade requirements for the subclass barley of the class Barley shall be used.

Grade Designations

(e) Grade designations for barley. The grade designations for barley shall include the letters "U.S."; the number of the grade or the words "Sample grade," as the case may be; the name of the class or subclass; the name of each applicable special grade; and when applicable the word "dockage" together with the percentage thereof. In the case of the class Mixed Barley, the grade designation shall also include, following the name of the class, the approximate percentage of Barley, Western Barley, and black barley in the mixture.

Dockage

(f) Dockage. The quantity of dockage shall be calculated in terms of percentage based on the total weight of the grain including the dockage. Dockage shall be stated in terms of whole percent and any fraction of a percent shall be disregarded.

Special Grades for Barley

(g) Special grades, special grade requirements and special grade designations for barley—(1) Test weight of Western Barley. For barley of the class Western Barley, the test weight per bushel in terms of whole pounds shall be added to and made a part of the grade designation, following the name of the class. A fraction of a pound shall be disregarded.

(2) Tough barley—(i) Requirements. Tough barley shall be (a) barley of the class Barley which contains more than 14.5 percent but not more than 16.0 percent of moisture and (b) barley of the class Western Barley which contains more than 13.5 percent but not more than 15.0 percent of moisture.

(ii) Grade designation. Tough barley shall be graded and designated according to the grade requirements of the standards applicable to such barley if it were not tough, and there shall be added to, and made a part of, the grade designation, the word "Tough."

(3) Two-rowed Barley—(i) Requirements. Two-rowed Barley shall consist of two-rowed barley of the class Barley, or of the class Western Barley, which does not meet the requirements for the special grades Choice Malting Two-rowed Barley, and Malting Two-rowed Barley, and may contain not more than 10.0 percent of six-rowed barley.

(ii) Grade designation. Two-rowed Barley shall be graded and designated according to the grade requirements of the standards applicable to such barley if it were not two-rowed, and there shall be added to, and made a part of, the grade designation, preceding the name of the class, the word "Two-rowed."

(4) Choice Malting Two-rowed Barley—(i) Requirements. Choice Malting Two-rowed Barley shall be two-rowed barley of the class Barley which consists of the Betzes varietal type or two-rowed barley of the class Western Barley which consists of the Hannchen or Hanna varietal type; which does not contain more than 3.0 percent of varietal types of barley other than Betzes, Hannchen, or Hanna; which meets the requirements for grade U.S. No. 1 Western Barley except that the class requirements for Western Barley and the limitation on seeds of wild brome grasses shall be disregarded in determining the U.S. numerical grade; which has a test weight per bushel of 52 pounds or more; which contains 90 percent or more of mellow kernels; which is not semisteely in mass; which does not contain more than 5.0 percent of thin barley; which does not contain more than 5.0 percent of skinned and/or broken kernels; and which does not contain barley injured by frost, by heat, or by mold; and shall not include barley of the special grades stained, smutty, garlicky, weevily, ergoty, or bleached.

(ii) Grade designation. Choice Malting Two-rowed Barley shall meet the special grade requirements for Choice Malting Two-rowed Barley and shall be graded and designated according to the class and grade requirements of the standards applicable to such barley if it were not Choice Malting Two-rowed, and there shall be added to and made a part of the grade designation, preceding the name of the class, the words "Choice Malting Two-rowed."

(5) Malting Two-rowed Barley—(i) Requirements. Malting Two-rowed Barley shall be two-rowed barley of the class Barley which consists of the Betzes varietal type or two-rowed barley of the class Western Barley which consists of the Hannchen or Hanna varietal types; which does not contain more than 5.0 percent of varietal types of barley other than Betzes, Hannchen, or Hanna; which meets the requirements for any of the grades U.S. No. 1 to U. S. No. 3 Western Barley, inclusive, except that the class requirements for Western Barley and the limitation on seeds of wild brome grasses shall be disregarded in determining the U.S. numerical grade; which does not meet the requirements for the special grade Choice Malting Two-rowed Barley; which has a test weight per bushel of 50 pounds or more; which contains 70 percent or more of mellow kernels; which is not semisteely in mass; which does not contain more than 10.0 percent of thin barley; which does not contain more than 10.0 percent of skinned and/or broken kernels; and which does not contain barley injured by frost, by heat, or by mold; and shall not include barley of the special grades stained, blighted, smutty, garlicky, weevily, ergoty, or bleached: *Provided*, That Malting Two-rowed Barley of the grade U.S. No. 1 shall contain not less than 80 percent of mellow kernels; and may not contain more than 3.0 percent of varietal types of barley other than Betzes, Hannchen, or Hanna, or more than 7.0 percent of thin barley, or more than 7.0 percent of skinned and/or broken kernels.

(ii) Grade designation. Malting Two-rowed Barley shall be graded and designated according to the special grade requirements for malting two-rowed barley and to the class and grade requirements applicable to such barley if it were not Malting Two-rowed, and there shall be added to and made a part of the grade designation, preceding the name of the class, the words "Malting Two-rowed."

(6) Bright Western Barley—(i) Requirements. Bright Western Barley shall be barley of the class Western Barley, except Bleached Barley, that is of good natural color.

(ii) Grade designation. Bright Western Barley shall be graded and designated according to the grade requirements of the standards applicable to such barley if it were not bright, and there shall be added to, and made a part of, the grade designation, preceding the name of the class, the word "Bright."

(7) Stained Western Barley—(i) Requirements. Stained Western Barley shall be barley of the class Western Barley, except Bleached Barley, that is badly stained or weathered.

(ii) Grade designation. Stained Western Barley shall be graded and designated according to the grade requirements of the standards applicable to such barley if it were not stained, and there shall be added to, and made a part of, the grade designation, the word "Stained."

(8) Blighted Barley—(i) Requirements. Blighted Barley shall be barley which contains more than 4.0 percent of barley damaged or materially discolored by blight and/or mold.

(ii) Grade designation. Blighted Barley shall be graded and designated according to the grade requirements of the standards applicable to such barley if it were not blighted, and there shall be added to, and made a part of, the grade designation, the word "Blighted."

(9) Smutty Barley—(i) Requirements. Smutty Barley shall be barley which has the kernels covered with smut spores, or which contains smut masses in excess of 0.2 percent.

(ii) Grade designation. Smutty Barley shall be graded and designated according to the grade requirements of the standards applicable to such barley if it were not smutty, and there shall be added to, and made a part of, the grade designation, the word "Smutty."

(10) Garlicky Barley—(i) Requirements. Garlicky Barley shall be barley which contains 3 or more green garlic bulblets, or an equivalent quantity of dry or partly dry bulblets, in 500 grams of barley.

(ii) Grade designation. Garlicky Barley shall be graded and designated according to the grade requirements of the standards applicable to such barley if it were not garlicky, and there shall be added to, and made a part of, the grade designation, the word "Garlicky."

(11) Weevily Barley—(i) Requirements. Weevily Barley shall be barley which is infested with live weevils or other insects injurious to stored grain.

(ii) Grade designation. Weevily Barley shall be graded and designated according to the grade requirements of the standards applicable to such barley if it were not weevily, and there shall be added to, and made a part of, the grade designation, the word "Weevily."

(12) Ergoty Barley—(i) Requirements. Ergoty Barley shall be barley which contains ergot in excess of 0.3 percent.

(ii) Grade designation. Ergoty Barley shall be graded and designated according to the grade requirements of the standards applicable to such barley if it were not ergoty, and there shall be added to, and made a part of, the grade designation, the word "Ergoty."

(13) Bleached Barley—(i) Requirements. Bleached Barley shall be barley which, in whole, or in part, has been treated by the use of sulphurous acid or any other bleaching agent.

(ii) Grade designation. Bleached Barley shall be graded and designated according to the grade requirements of the standards applicable to such barley if it were not bleached, and there shall be added to, and made a part of, the grade designation, the word "Bleached."

Interpretations [Added]

§ 26.901 Interpretation with respect to the term "distinctly low quality"

The term "distinctly low quality," when used in the official grain standards of the United States, shall be construed to include grain which contains more than two *Crotalaria* seeds (*Crotalaria* spp.) in 1,000 grams of grain.

OFFICIAL GRAIN STANDARDS OF THE UNITED STATES FOR OATS¹

§ 26.251 Terms defined

For the purposes of the Official Grain Standards of the United States for Oats:

(a) **Oats.** Oats shall be any grain which consists of 50 percent or more of cultivated oats (*Avena sativa* and/or *A. byzantina*) and may contain not more than 25.0 percent of wild oats and other grains for which standards have been established under the United States Grain Standards Act, singly or in combination.

(b) **Classes.** Oats shall be divided into the following five classes: White oats, Red oats, Gray oats, Black oats, and Mixed oats.

(c) **White oats.** The class White oats shall be common oats with the color and other physical characteristics of the white and/or yellow oats types and may contain not more than 10.0 percent of oats of other types.

(d) **Red oats.** The class Red oats shall be oats with the color and other physical characteristics of the red oats type and may contain not more than 10.0 percent of oats of other types.

(e) **Gray oats.** The class Gray oats shall be oats with the color and other physical characteristics of the gray oats and may contain not more than 10.0 percent of oats of other types.

(f) **Black oats.** The class Black oats shall be oats with the color and other physical characteristics of the black oats type and may contain not more than 10.0 percent of oats of other types.

¹ The specifications of these standards shall not excuse failure to comply with the provisions of the Federal Food, Drug, and Cosmetic Act.

(g) **Mixed oats.** The class Mixed oats shall include all mixtures of oats not provided for in the classes White oats, Red oats, Gray oats, and Black oats.

(h) **Grades.** Grades shall be the U.S. numerical grades, U.S. Sample grade, and special grades provided for in § 26.253.

(i) **Foreign material.** Foreign material shall be all matter except cultivated oats, other grains, and wild oats, and shall include oat clippings and detached oat hulls.

(j) **Other grains.** Other grains shall be wheat, rye, corn, grain sorghum, barley, hull-less barley, flaxseed, emmer, spelt, einkorn, Polish wheat, poulard wheat, cultivated buckwheat, and soybeans.

(k) **Sound cultivated oats.** Sound cultivated oats shall be all cultivated oats which are not heat-damaged, sprouted, frosted, badly ground damaged, badly weather damaged, or otherwise materially damaged.

(l) **Heat-damaged kernels.** Heat-damaged kernels shall be kernels and pieces of kernels of cultivated oats, other grains, and wild oats which have been materially discolored and damaged by heat.

(m) **Fine seeds.** Fine seeds shall be all matter which will pass readily through a 5/64 triangular hole sieve.

(n) **Wild oats.** Wild oats shall be the seeds of *Avena fatua* and *A. sterilis*.

(o) **Stones.** Stones shall be concreted earthy or mineral matter and other substances of similar hardness that do not disintegrate readily in water.

(p) **5/64 triangular hole sieve.** A 5/64 triangular hole sieve shall be an aluminum sieve 0.0319 inch thick with equilateral triangular perforations the inscribed circles of which are 0.0781 (5/64) inch in diameter and which are 1/4 inch from center to center. The perforations of each row shall be staggered in relation to the adjacent row.

(q) **0.064 x 3/8 sieve.** A 0.064 x 3/8 sieve shall be an aluminum sieve 0.0319 inch thick perforated with oblong holes 0.064 inch by 0.375 (3/8) inch, which are 0.125 (1/8) inch from center to center and which have 0.0525 inch end bridges. The perforations of each row shall be end staggered in relation to the adjacent row.

§ 26.252 Principles governing application of standards

The following principles shall apply in the determination of the classes and grades of oats:

(a) **Basis of determination.** All determinations shall be on the basis of the grain as a whole.

(b) **Percentages.** All percentages shall be determined upon the basis of weight.

(c) **Moisture.** Moisture shall be ascertained by the air-oven method for oats prescribed by the United States Department of Agriculture, as described in Service and Regulatory Announcements No. 147, issued by the Agricultural Marketing Service, or ascertained by any method which gives equivalent results.

(d) **Test weight per bushel.** Test weight per bushel shall be the weight per Winchester bushel as determined by the method prescribed by the United States Department of Agriculture, as described in Circular No. 921, issued June 1953, or as determined by any method which gives equivalent results.

§ 26.253 Grades, grade requirements, and grade designations

The following grades, grade requirements, and grade designations are applicable under these standards:

Oats

(a) Grades and grade requirements for Oats. (See also paragraph (c) of this section.)

Grade	Minimum limits of—		Maximum limits of—		
	Test weight per bushel	Sound cultivated oats	Heat-damaged kernels	Foreign material	Wild oats
	<i>Pounds</i>	<i>Percent</i>	<i>Percent</i>	<i>Percent</i>	<i>Percent</i>
U.S. No. 1 ¹ -----	34.0	97.0	0.1	2.0	2.0
U.S. No. 2 ² -----	32.0	94.0	.3	3.0	3.0
U.S. No. 3 ³ -----	30.0	90.0	1.0	4.0	5.0
U.S. No. 4 ⁴ -----	27.0	80.0	3.0	5.0	10.0
U.S. Sample grade.	U.S. Sample grade shall be oats which do not meet the requirements for any of the grades U.S. No. 1 to U.S. No. 4, inclusive; or which contain more than 16.0 percent of moisture; or which contain stones; or which are musty, or sour, or heating; or which have any commercially objectionable foreign odor except of smut or garlic; or which are otherwise of distinctly low quality.				

¹ The oats in grades U.S. No. 1 White Oats may contain not more than 5.0 percent of red oats, gray oats, and black oats, singly or in combination, of which not more than 2.0 percent may be black oats.

² The oats in grade U.S. No. 2 White Oats may contain not more than 3.0 percent of black oats.

³ Oats that are slightly weathered shall be graded not higher than U.S. No. 3.

⁴ Oats that are badly stained or materially weathered shall be graded not higher than U.S. No. 4.

Grade Designations

(b) Grade designations for oats. The grade designations for oats shall include the letters "U.S."; the number of the grade or the words "Sample grade," as the case may be; the name of the applicable class; and the name of each applicable special grade.

Special Grades for Oats

(c) Special grades, special grade requirements, and special grade designations for oats—(1) Bright oats—

(i) Requirements. Bright oats shall be oats, except Bleached oats, that are of good, natural color.

(ii) Grade designation. Bright oats shall be graded and designated according to the grade requirements of the standards applicable to such oats if they were not bright, and there shall be added to and made a part of the grade designation, preceding the name of the class, the word "Bright."

(2) Heavy oats—(i) Requirements. Heavy oats shall be oats which have a test weight per bushel of 36 pounds or more but less than 38 pounds.

(ii) Grade designation. Heavy oats shall be graded and designated according to the grade requirements of the standards applicable to such oats if they were not heavy, and there shall be added to and made a part of the grade designation, preceding the name of the class, the word "Heavy."

(3) Extra heavy oats—(i) Requirements. Extra heavy oats shall be oats which have a test weight per bushel of 38 pounds or more.

(ii) Grade designation. Extra heavy oats shall be graded and designated according to the grade requirements of the standards applicable to such oats if they were not extra heavy, and there shall be added to and made a part of the grade designation, preceding the name of the class, the words "Extra Heavy."

(4) Tough oats—(i) Requirements. Tough oats shall be oats which contain more than 14.0 percent but not more than 16.0 percent of moisture.

(ii) Grade designation. Tough oats shall be graded and designated according to the grade requirements of the standards applicable to such oats if they were not tough, and there shall be added to and made a part of the grade designation the word "Tough."

(5) Thin oats—(i) Requirements. Thin oats shall be oats which contain more than 20.0 percent of oats and/or other matter, except "fine seeds," that will pass readily through a $0.064 \times \frac{3}{8}$ sieve.

(ii) Grade designation. Thin oats shall be graded and designated according to the grade requirements of the standards applicable to such oats if they were not thin, and there shall be added to and made a part of the grade designation the word "Thin."

(6) Weevily oats—(i) Requirements. Weevily oats shall be oats which are infested with live weevils or other insects injurious to stored grain.

(ii) Grade designation. Weevily oats shall be graded and designated according to the grade requirements of the standards applicable to such oats if they were not weevily, and there shall be added to and made a part of the grade designation the word "Weevily."

(7) Smutty oats—(i) Requirements. Smutty oats shall be oats which have the kernels covered with smut spores or which contain smut masses and/or smut balls in excess of 0.2 percent.

(ii) Grade designation. Smutty oats shall be graded and designated according to the grade requirements of the standards applicable to such oats if they were not smutty, and there shall be added to and made a part of the grade designation the word "Smutty."

(8) Ergoty oats—(i) Requirements. Ergoty oats shall be oats which contain ergot in excess of 0.3 percent.

(ii) Grade designation. Ergoty oats shall be graded and designated according to the grade requirements of the standards applicable to such oats if they were not ergoty, and there shall be added to and made a part of the grade designation the word "Ergoty."

(9) Garlicky oats—(i) Requirements. Garlicky oats shall be oats which contain 4 or more green garlic bulblets, or an equivalent quantity of dry or partly dry bulblets, in 500 grams of oats.

(ii) Grade designation. Garlicky oats shall be graded and designated according to the grade requirements of the standards applicable to such oats if they were not garlicky, and there shall be added to and made a part of the grade designation the word "Garlicky."

(10) Bleached oats—(i) Requirements. Bleached oats shall be oats which in whole or in part, have been treated by the use of sulphurous acid or any other bleaching agent.

(ii) Grade designation. Bleached oats shall be graded and designated according to the grade requirements of the standards applicable to such oats if they were not bleached, and there shall be added to and make a part of the grade designation the word "Bleached."

Interpretations [Added]

§ 26.901 Interpretation with respect to the term "distinctly low quality"

The term "distinctly low quality," when used in the official grain standards of the United States, shall be construed to include grain which contains more than two crotalaria seeds (*Crotalaria* spp.) in 1,000 grams of grain.

OFFICIAL GRAIN STANDARDS OF THE UNITED STATES FOR RYE¹

§ 26.401 Terms defined

For the purposes of the official grain standards of the United States for rye:

(a) **Rye.** Rye shall be any grain which, before the removal of dockage, consists of 50 percent or more of rye and not more than 10.0 percent of other grains for which standards have been established under the provisions of the United States Grain Standards Act.

(b) **Grades.** Rye shall be graded and designated according to the respective grade requirements of the U.S. numerical grades and U.S. Sample grade of these standards, and according to the special grades when applicable.

NOTE:—"§ 26.402—(Rye; grade requirements) on following page."

§ 26.403 Dockage

Dockage includes weed seeds, weed stems, chaff, straw, grain other than rye, sand, dirt, and any other foreign material, which can be removed readily from the rye by the use of appropriate sieves and cleaning devices; also undeveloped, shriveled, and small pieces of rye kernels which are removed in properly separating the foreign material, and which cannot be recovered by properly rescreening or recleaning.

The quantity of dockage shall be calculated in terms of percentage based on the total weight of the grain including the dockage. The percentage of dockage so calculated, when equal to 1.0 percent or more, shall be stated in terms of whole percent, and when less than 1.0 percent shall not be stated. A fraction of a percent shall be disregarded. The word "Dockage", together with the percentage thereof, shall be added to the grade designation.

¹ The specifications of these standards shall not excuse failure to comply with the provisions of the Federal Food, Drug, and Cosmetic Act.

§ 26.402 Grades, grade requirements, and grade designations

Rye

(a) Grades and grade requirements for Rye. (See also §§ 26.403(a) through 26.408.)

Grade No.	Minimum test weight per bushel	Maximum limits of—			
		Damaged kernels (rye and other grains)		Foreign material	
		Total	Heat-damaged	Total	Foreign matter other than wheat
	<i>Pounds</i>	<i>Percent</i>	<i>Percent</i>	<i>Percent</i>	<i>Percent</i>
U.S. No. 1 ¹ -----	56.0	2.0	0.1	3.0	1.0
U.S. No. 2 ¹ -----	54.0	4.0	.2	6.0	2.0
U.S. No. 3 ¹ -----	52.0	7.0	.5	10.0	4.0
U.S. No. 4-----	49.0	15.0	3.0	10.0	6.0
U.S. Sample grade.	U.S. Sample grade shall include rye which does not come within the requirements of any of the grades from U.S. No. 1 to U.S. No. 4, inclusive; or which contains more than 16 percent of moisture; or which contains inseparable stones and/or cinders; or which is musty, or sour, or heating, or hot; or which has any commercially objectionable foreign odor except of smut or garlic; or which contains a quantity of smut so great that any one or more of the grade requirements cannot be applied accurately; or which is otherwise of distinctly low quality.				

¹ The rye in grade U.S. No. 1 may contain not more than 10.0 percent, in grade U.S. No. 2 not more than 15.0 percent, and in grade U.S. No. 3 not more than 25.0 percent of "thin" rye, which "thin" rye shall consist of rye and other matter that will pass readily through a sieve 0.032 inch thick with perforations 0.064 by 0.375 inch.

(b) **Grade designations for rye.** The grade designations for rye shall include the letters "U.S."; the number of the grade or the words "Sample grade," as the case may be; the word "Rye"; the name of each applicable special grade; and when applicable the word "dockage" together with the percentage thereof.

§ 26.403a Special grade; Plump rye

(a) **Definition.** Plump rye shall be rye which does not contain more than 5.0 percent of rye and other matter that will pass through a 20-gage metal sieve with rectangular perforations 0.064 inch wide by $\frac{3}{8}$ inch long.

(b) **Grades.** Plump rye shall be graded and designated according to the grade requirements of the standards applicable to such rye if it were not plump, and there shall be added to and made a part of the grade designation, immediately preceding the word rye, the word "Plump."

§ 26.404 Special grade; Tough rye

(a) **Definition.** Tough rye shall be rye which contains more than 14.0 percent but not more than 16.0 percent of moisture.

(b) **Grades.** Tough rye shall be graded and designated according to the grade requirements of the standards applicable to such rye if it were not tough, and there shall be added to and made a part of the grade designation, the word "Tough."

§ 26.405 Special grade; Smutty rye

(a) **Definition.** Smutty rye shall be rye which has an unmistakable odor of smut, or which contains balls, portions of balls, or spores, of smut, in excess of a quantity equal to 14 balls of average size in 250 grams of rye.

(b) **Grades.** Smutty rye shall be graded and designated according to the grade requirements of the standards applicable to such rye if it were not smutty; and

(1) In the case of smutty rye which has an unmistakable odor of smut, or which contains balls, portions of balls, or spores, of smut, in excess of a quantity equal to 14 balls but not in excess of a quantity equal to 30 balls of average size in 250 grams of rye, there shall be added to, and made a part of, the grade designation, the words "Light Smutty"; and

(2) In the case of smutty rye which contains balls, portions of balls, or spores, of smut, in excess of a quantity equal to 30 balls of average size in 250 grams of rye, there shall be added to, and made a part of, the grade designation, the word "Smutty."

§ 26.406 Special grade; Garlicky rye

(a) **Definition.** Garlicky rye shall be rye which contains two or more green garlic bulblets, or an equivalent quantity of dry or partly dry bulblets, in 1,000 grams of rye.

(b) **Grades.** Garlicky rye shall be graded and designated according to the grade requirements of the standards applicable to such rye if it were not garlicky; and

(1) In the case of garlicky rye which contains two or more but not more than six green garlic bulblets, or an equivalent quantity of dry or partly dry bulblets, in 1,000 grams of rye, there shall be added to, and made a part of, the grade designation, the words "Light Garlicky"; and

(2) In the case of garlicky rye which contains more than six green garlic bulblets, or an equivalent quantity of dry or partly dry bulblets, in 1,000 grams of rye, there shall be added to, and made a part of, the grade designation, the word "Garlicky."

§ 26.407 Special grade; Weevily rye

(a) **Definition.** Weevily rye shall be rye which is infested with live weevils or other insects injurious to stored grain.

(b) **Grades.** Weevily rye shall be graded and designated according to the grade requirements of the standards applicable to such rye if it were not weevily, and there shall be added to, and made a part of, the grade designation, the word "Weevily."

§ 26.408 Special grade; Ergoty rye

(a) **Definition.** Ergoty rye shall be rye which contains ergot in excess of 0.3 percent.

(b) **Grades.** Ergoty rye shall be graded and designated according to the grade requirements of the standards applicable to such rye if it were not ergoty, and there shall be added to, and made a part of, the grade designation, the word "Ergoty."

§ 26.409 Grade factors; definitions

(a) **Basis of grade determinations.** Each determination of dockage, temperature, odor, garlic, and live weevils or other insects injurious to stored grain, shall be upon the basis of the grain as a whole. All other determinations shall be upon the basis of the grain when free from dockage.

(b) **Percentages.** Percentages, except in the case of moisture, shall be percentages ascertained by weight.

(c) **Percentage of moisture.** Percentage of moisture shall be that ascertained by the air oven and the method of use thereof described in Service and Regulatory Announcements No. 147 of the Agricultural Marketing Service of the United States Department of Agriculture, or ascertained by any device and method which give equivalent results in the determination of moisture.

(d) **Test weight per bushel.** Test weight per bushel shall be the weight per Winchester bushel as determined by the testing apparatus and the method of use thereof described in Bulletin No. 1065, dated May 18, 1922, issued by the United States Department of Agriculture, or as determined by any device and method which give equivalent results in the determination of test weight per bushel.

(e) **Foreign material.** Foreign material shall include all matter other than rye which is not separated from the rye in the proper determination of dockage, except that smut balls shall not be considered as foreign material.

(f) **Other grains.** Other grains shall include wheat, oats, corn, grain sorghum, barley, hull-less barley, flaxseed, emmer, spelt, einkorn, Polish wheat, poulard wheat, cultivated buckwheat, and soybeans.

(g) Damaged kernels. Damaged kernels shall be kernels and pieces of kernels of rye and other grains which are heat damaged, sprouted, frosted, badly ground damaged, badly weather damaged, or otherwise materially damaged.

(h) Heat-damaged kernels. Heat-damaged kernels shall be kernels and pieces of kernels of rye and other grains which have been materially discolored and damaged by external heat or as a result of heating caused by fermentation.

Interpretations [Added]

§ 26.901 Interpretation with respect to the term “distinctly low quality”

The term “distinctly low quality,” when used in the official grain standards of the United States, shall be construed to include grain which contains more than two *crotalaria* seeds (*Crotalaria* spp.) in 1,000 grams of grain.

OFFICIAL GRAIN STANDARDS OF THE UNITED STATES FOR GRAIN SORGHUM¹

§ 26.551 Terms defined

For the purposes of the official grain standards of the United States for grain sorghum (*Sorghum vulgare*):

(a) **Grain sorghum.** Grain sorghum shall be any grain which, before the removal of dockage, consists of 50 percent or more of whole kernels of grain sorghum, which contains not more than 10.0 percent of other grains for which standards have been established under the United States Grain Standards Act.

(b) **Classes.** Grain sorghum shall be divided into the following four classes: Yellow Grain Sorghum, White Grain Sorghum, Brown Grain Sorghum, and Mixed Grain Sorghum.

(1) **Yellow Grain Sorghum.** The class Yellow Grain Sorghum shall be grain sorghum with yellow, salmon-pink, or red seedcoats, which contains not more than 10.0 percent of grain sorghum of other colors.

(2) **White Grain Sorghum.** The class White Grain Sorghum shall be grain sorghum with white seedcoats, which contains not more than 10.0 percent of grain sorghum of other colors. Colored spots upon kernels of grain sorghum otherwise white shall not affect their classification as White Grain Sorghum. Grain sorghum with white seedcoats and brown subcoats shall not be classed as White Grain Sorghum. (See subparagraph (3) of this paragraph.)

¹Compliance with the provisions of these standards does not excuse failure to comply with the provisions of the Federal Food, Drug, and Cosmetic Act, or other Federal laws.

(3) **Brown Grain Sorghum.** The class Brown Grain Sorghum shall be grain sorghum with brown seedcoats, which contains not more than 10.0 percent of grain sorghum of other colors. Grain sorghum with white seedcoats and brown subcoats shall be classed as Brown Grain Sorghum.

(4) **Mixed Grain Sorghum.** The class Mixed Grain Sorghum shall be grain sorghum which does not meet the requirements for the class Yellow Grain Sorghum, White Grain Sorghum, or Brown Grain Sorghum.

(c) **Grades.** Grades shall be the U.S. numerical grades, U.S. Sample grade, and special grades provided for in § 26.553.

(d) **Dockage.** Dockage shall be sand, dirt, finely broken kernels of grain sorghum, weed seeds, and any other material which will pass readily through a $2\frac{1}{2}/64$ round hole sieve (see also paragraph (b) of § 26.552 and paragraph (b) of § 26.553).

(e) **Broken kernels, foreign material, and other grains.** Broken kernels, foreign material, and other grains shall be all matter including kernels and pieces of kernels of grain sorghum, except dockage, which will pass readily through a $5/64$ triangular hole sieve and all matter other than grain sorghum, which remains on the sieve after sieving.

(f) **Other grains.** Other grains shall be barley, hull-less barley, corn, flaxseed, oats, rye, soybeans, wheat, cultivated buckwheat, einkorn, emmer, Polish wheat, popcorn, poulard wheat, rice, spelt, sweet corn, wild oats, and nongrain sorghum.

(g) **Nongrain sorghum.** Nongrain sorghum shall be the seeds of sweet sorghum (sorgo), sorghum-sudangrass hybrids, sorgrass, broomcorn, johnsongrass, and sudangrass.

(h) **Damaged kernels (total).** Damaged kernels (total) shall be kernels and pieces of kernels of grain sorghum and other grains which are heat-damaged, sprouted, frosted, badly ground-damaged, badly weather-damaged, moldy, diseased, or otherwise materially damaged.

(i) **Heat-damaged kernels.** Heat-damaged kernels shall be kernels and pieces of kernels of grain sorghum and other grains which are materially discolored and damaged by heat.

(j) Stones. Stones shall be concreted earthy or mineral matter and other substances of similar hardness that do not disintegrate readily in water.

(k) $5/64$ triangular hole sieve. A $5/64$ triangular hole sieve shall be an aluminum sieve 0.0319 inch thick with equilateral triangular perforations, the inscribed circles of which are 0.0781 ($5/64$) inch in diameter and which are $1/4$ inch from center to center. The perforations of each row shall be staggered in relation to the adjacent row.

(l) $21\frac{1}{2}/64$ round hole sieve. A $21\frac{1}{2}/64$ round hole sieve shall be an aluminum sieve 0.0319 inch thick perforated with round holes 0.0391 ($21\frac{1}{2}/64$) inch in diameter which are 0.075 inch from center to center. The perforations of each row shall be staggered in relation to the adjacent row.

§ 26.552 Principles governing application of standards

The following principles shall apply in the determination of the classes and grades of grain sorghum:

(a) Basis of determinations. Each determination of "broken kernels, foreign material, and other grains" shall be upon the basis of the grain when free from dockage. Each determination of class, damaged kernels, heat-damaged kernels, and stones shall be upon the basis of the grain when free from dockage and that part of the broken kernels, foreign material, and other grains which can be removed readily by the use of a $5/64$ triangular hole sieve. All other determinations shall be upon the basis of the grain as a whole.

(b) Percentages. Percentages shall be upon the basis of weight. The percentage of dockage when equal to 1.0 percent or more shall be stated in terms of whole percent and when less than 1.0 percent shall not be stated. A fraction of a percent shall be disregarded.

(c) Moisture. Moisture shall be ascertained by the air-oven method for grain sorghum prescribed by the United States Department of Agriculture as described in Service and Regulatory Announcements No. 147 (1959 revision), issued by the Agricultural Marketing Service, or ascertained by any method which gives equivalent results.

(d) **Test weight per bushel.** Test weight per bushel shall be the weight per Winchester bushel, as determined by the method prescribed by the United States Department of Agriculture as described in Circular 921, issued June 1953, or as determined by any method which gives equivalent results.

§ 26.553 Grades, grade requirements and grade designations

The following grades, grade requirements, and grade designations are applicable under these standards:

Grain Sorghum

(a) **Grades and grade requirements for Grain Sorghum.** (See also paragraph (c) of this section.)

Grade	Minimum test weight per bushel	Maximum limits of—			
		Mois- ture	Damaged kernels		Broken kernels, foreign, material, and other grains
			Total	Heat-damaged kernels	
	<i>Pounds</i>	<i>Percent</i>	<i>Percent</i>	<i>Percent</i>	<i>Percent</i>
U.S. No. 1-----	57. 0	13. 0	2. 0	0. 2	4. 0
U.S. No. 2-----	55. 0	14. 0	5. 0	. 5	8. 0
U.S. No. 3 ¹ -----	53. 0	15. 0	10. 0	1. 0	12. 0
U.S. No. 4-----	51. 0	18. 0	15. 0	3. 0	15. 0
U.S. Sample grade.	U.S. Sample grade shall be grain sorghum which does not meet the requirements of any of the grades from U.S. No. 1 to U.S. No. 4, inclusive; or which contains stones; or which is musty, or sour, or heating; or which is badly weathered; or which has any commercially objectionable foreign odor except of smut; or which is otherwise of distinctly low quality.				

¹ Grain sorghum which is distinctly discolored shall not be graded higher than U.S. No. 3.

Grade Designations

(b) Grade designations for grain sorghum. The grade designations for grain sorghum shall include in the order named, the letters "U.S."; the number of the grade or the words "Sample grade", as the case may be; the name of the class; the name of each applicable special grade; and when applicable the word "dockage" together with the percentage thereof. In the case of the class Mixed Grain Sorghum, the grade designation shall also include, following the name of the class, the approximate percentages of yellow grain sorghum, white grain sorghum, and brown grain sorghum, if any, in the mixture.

Special Grades for Grain Sorghum

(c) Special grades, special grade requirements, and special grade designations for grain sorghum—(1) Smutty grain sorghum—(i) Requirements. Smutty grain sorghum shall be grain sorghum the kernels of which are covered with smut spores, or which contains 20 or more smut masses in 100 grams of grain sorghum.

(ii) Grade designation. Smutty grain sorghum shall be graded and designated according to the grade requirements of the standards applicable to such grain sorghum if it were not smutty, and there shall be added to and made a part of the grade designation the word "Smutty."

(2) Weevily grain sorghum—(i) Requirements. Weevily grain sorghum shall be grain sorghum which is infested with live weevils or other live insects injurious to stored grain.

(ii) Grade designation. Weevily grain sorghum shall be graded and designated according to the grade requirements of the standards applicable to such grain sorghum if it were not weevily, and there shall be added to and made a part of the grade designation the word "Weevily."

Interpretations [Added]

§ 26.901 Interpretation with respect to the term "distinctly low quality"

The term "distinctly low quality," when used in the official grain standards of the United States, shall be construed to include grain which contains more than two *Crotalaria* seeds (*Crotalaria* spp.) in 1,000 grams of grain.

OFFICIAL GRAIN STANDARDS OF THE UNITED STATES FOR FLAXSEED¹

§ 26.501 Terms defined

For the purposes of the Official Grain Standards of the United States for Flaxseed (*Linum usitatissimum*), the terms specified in §§ 26.502 through 26.506 shall have the meanings stated in said sections, respectively.

§ 26.502 Flaxseed

Flaxseed shall be any grain which, before the removal of dockage, consists of 50 percent or more of flaxseed and not more than 20.0 percent of other grains for which standards have been established under the provisions of the United States Grain Standards Act.

§ 26.503 Dockage

Dockage shall be all matter other than flaxseed, also underdeveloped and shriveled flaxseed and small pieces of flaxseed removed in properly separating the material other than flaxseed and which cannot be recovered by properly rescreening or recleaning. (See also §§ 26.509 and 26.514.)

§ 26.504 Damaged flaxseed

Damaged flaxseed shall be flaxseed and pieces of flaxseed which are heat-damaged, sprouted, frosted, badly ground damaged, badly weather damaged, moldy, diseased, or otherwise materially damaged.

§ 26.505 Heat-damaged flaxseed

Heat-damaged flaxseed shall be flaxseed and pieces of flaxseed which are materially discolored and damaged by heat.

¹ The specifications of these standards shall not excuse failure to comply with the provisions of the Federal Food, Drug, and Cosmetic Act.

§ 26.506 Stones

Stones shall be concreted earthy or mineral matter and other substances of similar hardness that do not disintegrate readily in water.

§ 26.507 Principles governing application of standards

The principles stated in §§ 26.508 through 26.511 shall apply in the determination of the grades of flaxseed.

§ 26.508 Basis of determinations

Each determination of moisture, test weight per bushel, heat-damaged flaxseed, and damaged flaxseed, shall be upon the basis of the grain after the removal of that part of the dockage which can be removed readily by the use of appropriate sieves and cleaning devices. All other determinations shall be upon the basis of the grain as a whole.

§ 26.509 Percentages

All percentages shall be upon the basis of weight. Percentages except for dockage shall be expressed in whole and tenth percent to the nearest tenth of a percent. The percentage of dockage when equal to 1.0 percent or more shall be stated in terms of whole percent and when less than 1.0 percent shall not be stated. A fraction of a percent of dockage shall be disregarded.

§ 26.510 Moisture

Moisture shall be ascertained by use of the equipment and procedure prescribed by the Consumer and Marketing Service, U.S. Department of Agriculture. (Information thereon may be obtained from said Service.)

§ 26.511 Test weight per bushel

Test weight per bushel shall be the weight per Winchester bushel as determined by the method prescribed by the U.S. Department of Agriculture as described in Circular No. 921, issued June 1953. Test weight per bushel shall be expressed in whole and half pounds. A fraction of a half pound shall be disregarded.

§ 26.512 Grades

Grades shall be the U.S. numerical grades and U.S. Sample grade provided for in § 26.513.

§ 26.513 Grades and grade requirements for flaxseed.

Grade	Minimum test weight per bushel	Maximum limits of—	
		Heat- damaged flaxseed	Damaged flaxseed (total)
	<i>Pounds</i>	<i>Percent</i>	<i>Percent</i>
U.S. No. 1-----	49. 0	0. 2	10. 0
U.S. No. 2-----	47. 0	. 5	15. 0
U.S. Sample grade-----	U.S. Sample grade shall be flaxseed which does not meet the requirements for grade U.S. No. 1 or U.S. No. 2; or which contains more than 9.5 percent of moisture; or which contains castor beans (<i>Ricinus communis</i>), crotalaria seeds (<i>Crotalaria spp.</i>), stones, unknown foreign substances, or commonly recognized harmful or toxic substances; or which is musty, sour, or heating; or which has any commercially objectionable foreign odor; or which is otherwise of distinctly low quality.		

§ 26.514 Grade designations for flaxseed

The grade designation for flaxseed shall include in the order named, the letters "U.S."; the number of the grade or the words "Sample grade," as the case may be; the word "Flaxseed"; and, when applicable, the word "dockage" together with the percentage thereof.

Interpretations [Added]

§ 26.901 Interpretation with respect to the term "distinctly low quality"

The term "distinctly low quality," when used in the official grain standards of the United States, shall be construed to include grain which contains more than two crotalaria seeds (*Crotalaria spp.*) in 1,000 grams of grain.

OFFICIAL GRAIN STANDARDS OF THE UNITED STATES FOR SOYBEANS¹

§ 26.601 Terms defined

For the purposes of the official grain standards of the United States for soybeans:

(a) **Soybeans.** Soybeans shall be any grain which consists of 50 percent or more of whole or broken soybeans which will not pass readily through an 8/64 sieve and not more than 10.0 percent of other grains for which standards have been established under the United States Grain Standards Act.

(b) **Classes.** Soybeans shall be divided into the following five classes: Yellow soybeans, green soybeans, brown soybeans, black soybeans, and mixed soybeans.

(c) **Yellow soybeans.** Yellow soybeans shall be any soybeans which have yellow or green seed coats, and which in cross section are yellow or have a yellow tinge, and may include not more than 10.0 percent of soybeans of other classes.

(d) **Green soybeans.** Green soybeans shall be any soybeans which have green seed coats, and which in cross section are green, and may include not more than 10.0 percent of soybeans of other classes.

(e) **Brown soybeans.** Brown soybeans shall be any soybeans with brown seed coats, and may include not more than 10.0 percent of soybeans of other classes.

(f) **Black soybeans.** Black soybeans shall be any soybeans with black seed coats, and may include not more than 10.0 percent of soybeans of other classes.

¹ The specifications of these standards shall not excuse failure to comply with the provisions of the Federal Food, Drug, and Cosmetic Act.

(g) **Mixed soybeans.** Mixed soybeans shall be any mixture of soybeans which does not meet the requirements of the classes yellow soybeans, green soybeans, brown soybeans, or black soybeans. Bicolored soybeans shall be classified as mixed soybeans.

(h) **Grades.** Grades shall be the U.S. numerical grades, U.S. Sample grade, and special grades provided for in § 26.603.

(i) **Bicolored soybeans.** Bicolored soybeans shall be any soybeans with seed coats of two colors, one of which is black or brown.

(j) **Splits.** Splits shall be pieces of soybeans that are not damaged.

(k) **Damaged kernels.** Damaged kernels shall be soybeans and pieces of soybeans which are heat-damaged, sprouted, frosted, badly ground-damaged, badly weather-damaged, moldy, diseased, stink-bug-stung, or otherwise materially damaged. Stink-bug-stung kernels shall be considered damaged kernels at the rate of one-fourth of the actual percentage of the stung kernels.

(l) **Heat-damaged kernels.** Heat-damaged kernels shall be soybeans and pieces of soybeans which are materially discolored and damaged by heat.

(m) **Foreign material.** Foreign material shall be all matter, including soybeans and pieces of soybeans, which will pass readily through an 8/64 sieve and all matter other than soybeans remaining on such sieve after sieving.

(n) **Stones.** Stones shall be concreted earthy or mineral matter and other substances of similar hardness that do not disintegrate readily in water.

(o) **8/64 sieve.** An 8/64 sieve shall be a metal sieve 0.032 inch thick perforated with round holes 0.125 (8/64) inch in diameter with approximately 4,736 perforations per square foot.

§ 26.602 Principles governing application of standards

The following principles shall apply in the determination of the classes and grades of soybeans:

(a) Basis of determination. Each determination of class, splits, damaged kernels, and heat-damaged kernels, and of black, brown, and/or bicolored soybeans in Yellow or Green Soybeans, shall be upon the basis of the grain when free from foreign material. All other determinations shall be upon the basis of the grain as a whole.

(b) Percentages. All percentages shall be upon the basis of weight. The percentage of splits shall be expressed in terms of whole percents. All other percentages shall be expressed in terms of whole and tenths percents.

(c) Moisture. Moisture shall be ascertained by the air-oven method prescribed by the United States Department of Agriculture, as described in Service and Regulatory Announcement No. 147, issued by the Agricultural Marketing Service, or ascertained by any method which gives equivalent results.

(d) Test weight per bushel. Test weight per bushel shall be the weight per Winchester bushel as determined by the method prescribed by the United States Department of Agriculture, as described in Circular No. 921 issued June 1953, or as determined by any method which gives equivalent results.

§ 26.603 Grades, grade requirements, and grade designations

8.4

The following grades, grade requirements, and grade designations are applicable under these standards:

Soybeans

(a) Grades and grade requirements for Soybeans. (See also paragraph (c) of this section.)

Grade	Minimum test weight per bushel	Maximum limits of—				
		Moisture	Damaged kernels		Foreign material	Brown, black, and/or bicolored soybeans in yellow or green soybeans
			Total	Heat damaged		
U.S. No. 1	Pounds	Percent	Percent	Percent	Percent	Percent
U.S. No. 2	56. 0	13. 0	2. 0	0. 2	1. 0	1. 0
U.S. No. 3 ¹	54. 0	14. 0	3. 0	. 5	2. 0	2. 0
U.S. No. 4 ²	52. 0	16. 0	5. 0	1. 0	3. 0	5. 0
U.S. Sample grade	49. 0	18. 0	8. 0	3. 0	5. 0	10. 0
U.S. Sample grade shall be soybeans which do not meet the requirements for any of the grades from U.S. No. 1 to U.S. No. 4, inclusive; or which are musty, sour, or heating; or which have any commercially objectionable foreign odor; or which contain stones; or which are otherwise of distinctly low quality.						

¹ Soybeans which are purple mottled or stained shall be graded not higher than U.S. No. 3.

² Soybeans which are materially weathered shall be graded not higher than U.S. No. 4.

Grade Designation

(b) Grade designations for soybeans. The grade designations for soybeans shall include in the order named, the letters "U.S."; the number of the grade or the words "Sample grade," as the case may be; the name of the class; and the name of each applicable special grade. In the case of mixed soybeans, the grade designation shall also include, following the name of the class, the approximate percentages of yellow, green, brown, black, and bicolored soybeans in the mixture.

Special Grades for Soybeans

(c) Special grades, special grade requirements, and special grade designations for soybeans—(1) Garlicky soybeans (i) Requirements. Garlicky soybeans shall be soybeans which contain 5 or more garlic bulblets in 1,000 grams.

(ii) Grade designation. Garlicky soybeans shall be graded and designated according to the grade requirements of the standards applicable to such soybeans if they were not garlicky and there shall be added to and made a part of the grade designation the word "garlicky."

(2) Weevily soybeans—(i) Requirements. Weevily soybeans shall be soybeans which are infested with live weevils or other live insects injurious to stored grain.

(ii) Grade designation. Weevily soybeans shall be graded and designated according to the grade requirements of the standards applicable to such soybeans if they were not weevily, and there shall be added to and made a part of the grade designation the word "weevily."

Interpretations [Added]

§ 26.901 Interpretation with respect to the term "distinctly low quality"

The term "distinctly low quality," when used in the official grain standards of the United States, shall be construed to include grain which contains more than two *Crotalaria* seeds (*Crotalaria* spp.) in 1,000 grams of grain.

**§ 26.902 Interpretation with respect to the term
“purple mottled or stained”**

The term “purple mottled or stained,” when used in the official grain standards of the United States for soybeans (see § 26.603(a)) shall be construed to include soybeans which are discolored by the growth of a fungus; or by dirt; or by a dirtlike substance including nontoxic inoculants; or by other nontoxic substances.

**§ 26.903 Interpretation with respect to the term
“bicolored soybeans”**

The term “bicolored soybeans,” when used in the Official Grain Standards of the United States for Soybeans (see § 26.601(i)), shall be construed to include any soybeans with seedcoats of two colors, one of which is black or brown, when the black and/or brown color covers 50 percent or more of the seedcoat. The hilum of a soybean shall not be considered a part of the seedcoat.

OFFICIAL GRAIN STANDARDS OF THE UNITED STATES FOR MIXED GRAIN ¹

§ 26.451 Terms defined

For the purposes of the Official Grain Standards of the United States for Mixed Grain:

(a) **Mixed grain.** Mixed grain shall be any mixture of grains for which standards have been established under the United States Grain Standards Act, or any mixture of such grains and wild oats, or wild oats, provided that such mixture does not come within the requirements of any of the standards for such grains, and that such mixture or wild oats does not contain more than 50 percent of foreign material.

(b) **Grades.** Grades shall be "U.S. Mixed Grain," "U.S. No. 1 Mixed Feed Oats," "U.S. No. 2 Mixed Feed Oats," "U.S. Sample grade Mixed Grain," and special grades provided for in § 26.453.

(c) **Wild oats.** Wild oats shall be the seeds of *Avena fatua* and *A. sterilis*.

(d) **Cultivated oats.** Cultivated oats shall be the seeds of *Avena sativa* and *A. byzantina*.

(e) **Mixed feed oats.** Mixed feed oats shall be any Mixed Grain which contains not less than 75 percent of wild oats, or not less than 75 percent of wild oats and cultivated oats in combination, which combination shall include more than 25.0 percent of wild oats; and which contains not more than 7.0 percent of foreign material, not more than 15.0 percent of damaged kernels, and not more than 3.0 percent of heat-damaged kernels; and which has a test weight per bushel of not less than 29 pounds.

¹ The specifications of these standards shall not excuse failure to comply with the provisions of the Federal Food, Drug, and Cosmetic Act.

(f) Foreign material. Foreign material shall be all matter except wild oats and grains for which standards have been established under the United States Grain Standards Act.

(g) Damaged kernels. Damaged kernels shall be all kernels and pieces of kernels of wild oats and grains for which standards have been established under the United States Grain Standards Act, which are heat damaged, sprouted, frosted, badly ground damaged, badly weather damaged, moldy, diseased, or otherwise materially damaged.

(h) Heat-damaged kernels. Heat-damaged kernels shall be kernels and pieces of kernels of wild oats and grains for which standards have been established under the United States Grain Standards Act, which have been materially discolored and damaged by heat.

(i) Stones. Stones shall be concreted earthy or mineral matter and other substances of similar hardness that do not disintegrate readily in water.

§ 26.452 Principles governing application of standards

The following principles shall apply in the determination of the grades for mixed grain:

(a) Basis of determination. All determinations shall be on the basis of the grain as a whole.

(b) Percentages. All percentages shall be determined upon the basis of weight. The percentage of each kind of grain, including wild oats, and foreign material shall be stated in terms of whole percents.

(c) Moisture. Moisture shall be determined by the air-oven method prescribed by the United States Department of Agriculture as described in Service and Regulatory Announcement No. 147 (1959 revision) issued by the Agricultural Marketing Service for the kind of grain which predominates in the mixture or determined by any method which gives equivalent results.

(d) Test weight per bushel. Test weight per bushel shall be the weight per Winchester bushel as determined by the method prescribed by the United States Department of Agriculture as described in Circular No. 921, issued June 1953, or as determined by any method which gives equivalent results.

§ 26.453 Grades, grade requirements, and grade designations

The following grades, grade requirements, and grade designations are applicable under these standards:

(a) Grades and grade requirements for U.S. Mixed Grain. (See also paragraph (c) of this section.)

(1) U.S. Mixed Grain (Grade). The grade "U.S. Mixed Grain" shall be mixed grain with not more than 15.0 percent of damaged kernels, and not more than 3.0 percent of heat-damaged kernels, and which otherwise does not meet the requirements for mixed feed oats, or the requirements for the grade "U.S. Sample grade Mixed Grain."

(2) U.S. No. 1 Mixed Feed Oats. The grade U.S. No. 1 Mixed Feed Oats shall be mixed grain which meets the requirements for mixed feed oats; which contains not more than 5.0 percent of foreign material, not more than 10.0 percent of damaged kernels, and not more than 2.0 percent of heat-damaged kernels; which has a test weight per bushel of not less than 32 pounds; and which otherwise does not meet the requirements for the grades U.S. Mixed Grain, U.S. No. 2 Mixed Feed Oats, or U.S. Sample grade Mixed Grain.

(3) U.S. No. 2 Mixed Feed Oats. The grade U.S. No. 2 Mixed Feed Oats shall be mixed grain which meets the requirements for mixed feed oats; which contains not more than 7.0 percent of foreign material, not more than 15.0 percent of damaged kernels, and not more than 3.0 percent of heat-damaged kernels; which has a test weight per bushel of not less than 29 pounds; and which otherwise does not meet the requirements for the grades U.S. Mixed Grain, U.S. No. 1 Mixed Feed Oats, or U.S. Sample grade Mixed Grain.

(4) U.S. Sample grade Mixed Grain. The grade "U.S. Sample grade Mixed Grain" shall be mixed grain which does not meet the requirements for mixed feed oats, or the requirements for the grade U.S. Mixed Grain; or which contains more than 16.0 percent of moisture; or which contains stones; or which is musty, or sour, or heating; or which has any commercially objectionable foreign odor, except of smut or garlic; or which is otherwise of distinctly low quality.

Grade Designations

(b) **Grade designations for U.S. Mixed Grain.** The grade designation for mixed grain shall include the words "U.S. Mixed Grain," "U.S. No. 1 Mixed Feed Oats," "U.S. No. 2 Mixed Feed Oats," or "U.S. Sample grade Mixed Grain," as the case may be, and the name of each applicable special grade. In the case of the grades "U.S. Mixed Grain" and "U.S. Sample grade Mixed Grain" the grade designation shall also include the name and approximate percentage of each kind of grain, including wild oats, which constitutes 10.0 percent or more of the mixture, in the order of predominance and, when applicable, the words "other grains" followed by a statement of the percentage of the combined quantity of those kinds of grains, including wild oats, each of which is present in a quantity less than 10.0 percent; and the words "Foreign Material" together with a statement of the percentage thereof.

Special Grades for Mixed Grain

(c) **Special grades, special grade requirements and special grade designations for mixed grain—(1) Tough mixed grain—(i) Requirements.** Tough mixed grain shall be mixed grain which contains more than 14.0 percent but not more than 16.0 percent of moisture.

(ii) Grade designation. Tough mixed grain shall be graded according to the grade requirements of the standards applicable to such mixed grain if it were not tough, and there shall be added to and made a part of the grade designation the word "Tough."

(2) Smutty mixed grain—(i) Requirements. Smutty mixed grain shall be (a) mixed grain in which wheat or rye predominates, and which contains balls, portions of balls, or spores, of smut, in excess of a quantity equal to 14 balls of average size in 250 grams of mixed grain, or (b) any other mixed grain which has the kernels covered with smut spores, or which contains smut masses and/or smut balls in excess of 0.2 percent.

(ii) Grade designation. Smutty mixed grain shall be graded and designated according to the grade requirements of the standards applicable to such mixed grain if it were not smutty, and there shall be added to and made a part of the grade designation, the word "Smutty."

(3) Ergoty mixed grain—(i) Requirements. Ergoty mixed grain shall be mixed grain which contains ergot in excess of 0.3 percent.

(ii) Grade designation. Ergoty mixed grain shall be graded and designated according to the grade requirements of the standards applicable to such mixed grain if it were not ergoty, and there shall be added to and made a part of the grade designation, the word "Ergoty."

(4) Garlicky mixed grain—(i) Requirements. Garlicky mixed grain shall be (a) mixed grain in which wheat or rye predominates, and which contains 2 or more green garlic bulblets, or an equivalent quantity of dry or partly dry bulblets, in 1,000 grams of mixed grain; or (b) mixed grain in which grains other than wheat and rye predominate, and which contains 4 or more green garlic bulblets, or an equivalent quantity of dry or partly dry bulblets, in 500 grams of mixed grain.

(ii) Grade designation. Garlicky mixed grain shall be graded and designated according to the grade requirements of the standards applicable to such mixed grain if it were not garlicky, and there shall be added to and made a part of the grade designation, the word "Garlicky."

(5) Weevily mixed grain—(i) Requirements. Weevily mixed grain shall be mixed grain which is infested with live weevils or other insects injurious to stored grain.

(ii) Grade designation. Weevily mixed grain shall be graded and designated according to the grade requirements of the standards applicable to such mixed grain if it were not weevily, and there shall be added to and made a part of the grade designation, the word "Weevily."

(6) Blighted mixed grain—(i) Requirements. Blighted mixed grain shall be mixed grain in which barley predominates and which, as a whole, contains more than 4.0 percent of barley damaged or materially discolored by blight and/or mold.

(ii) Grade designation. Blighted mixed grain shall be graded and designated according to the grade requirements of the standards applicable to such mixed grain if it were not blighted, and there shall be added to and made a part of the grade designation, the word "Blighted."

(7) Treated mixed grain—(i) Requirements. Treated mixed grain shall be mixed grain which has been scoured, limed, washed, sulfured, or treated in such a manner that its true quality is not reflected by the grade designation "U.S. Mixed Grain," "U.S. No. 1 Mixed Feed Oats," "U.S. No. 2 Mixed Feed Oats," or "U.S. Sample grade Mixed Grain."

(ii) Grade designation. Treated mixed grain shall be graded and designated according to the grade requirements of the standards applicable to such mixed grain if it were not treated, and there shall be added to and made a part of the grade designation, a statement indicating the kind of treatment.

Interpretations [Added]

§ 26.901 Interpretation with respect to the term "distinctly low quality"

The term "distinctly low quality," when used in the official grain standards of the United States, shall be construed to include grain which contains more than two crotalaria seeds (*Crotalaria* spp.) in 1,000 grams of grain.

